IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Todd E. Bofinger et al.   Art Unit : 1745
Serial No. : 10/761,415   Examiner : Helen OK Chu
Filed : January 22, 2004   Conf. No. : 1429
Title : CATHODE MATERIAL FOR LITHIUM BATTERY

MAIL STOP AF
Commissioner for Patents
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<u>REPLY TO ACTION OF JUNE 13, 2008</u>

Applicants request reconsideration and withdrawal of the 35 U.S.C. § 102(b) rejection based on Dahn et al., U.S. Pat. 4,959,282 ("Dahn").

Claims 22-25 are directed to making a lithiated gamma-manganese dioxide having about 0.22 mole of lithium per mole of manganese dioxide. Dahn does not disclose a gamma-manganese dioxide including about 0.22 mole of lithium per mole of manganese dioxide, and for that reason the 35 U.S.C. § 102(b) rejection should be withdrawn.

Dahn's focus is on lithiated gamma-manganese dioxides including about 0.33 mole to about 0.45 mole of lithium per mole of manganese dioxide. See, e.g., col. 3, lines 23-38 and claim 1. The Examiner appears to recognize this, but points to Table II and Fig. 1 of Dahn as support for the 35 U.S.C. § 102(b) rejection. Table II is reproduced below:

TABLE II

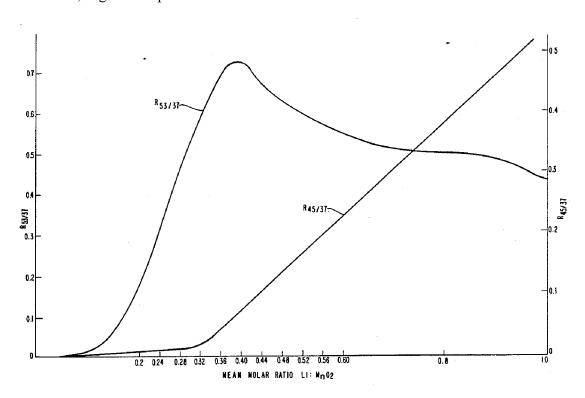| Sample	Mean Molar Ratio Li:MnO_2	$R_{53/47}$	$R_{45/37}$
A	0.000	0.000	0.000
B	0.145	0.061	0.000
C	0.289	0.494	0.010
D	0.360	0.687	0.075
E	0.431	0.676	0.088
F	0.500	0.557	0.243
G	0.573	0.618	0.161
H	0.715	0.508	0.482
I	0.859	0.507	0.286
J	1.000	0.433	0.533

Table II is part of Example I in Dahn. In Example I Dahn describes preparing 10 samples of

lithiated gamma-manganese dioxides having different quantities of lithium. Dahn then lists the

10 samples in Table II. None of the sample include about 0.22 mole of lithium per mole of

manganese dioxide; the closest to 0.22 mole are samples B (0.143 mole) and sample C (0.289

mole). Thus, none of the samples made by Dahn in Example I provide a basis for the

anticipation rejection of claims 22-25.

Figure 1 is a graph plotting moles of lithium in the 10 samples of manganese dioxides

prepared by Dahn versus some crystal structure parameters for the samples (also tabulated in

Table II, above). As Dahn explains (col. 8, lines 15-20):

> The dependence of $R_{53/37}$ and $R_{45/37}$ on the molar ratio Li to MnO_2 (the subscript y
> in the formula Li_yMnO_2) is apparent fro FIG. 1. Further, FIG. 1 illustrates the
> existence of a relatively narrow range of desirable y-values or molar ratios
> extending from about y=0.33 to about y=0.43.

For convenience, Figure 1 is provided below:

As is apparent from Figure 1, and the discussion of Figure 1 in Example I, Figure 1 is not based

on, and does not disclose, any samples of lithiated gamma manganese dioxide beyond these

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listed in Table II. Thus, Figure 1 does not add anything to the disclosure in Table II (and Example I).

Therefore, Dahn does not disclose a sample of lithiated gamma-manganese including about 0.22 mole of lithium per mole of manganese dioxide. As a result, claims 22-25 are novel in view of Dahn and the 35 U.S.C. § 102(b) rejection should be withdrawn.

Although the Examiner has not made a 35 U.S.C. § 103(a) rejection of claims 22-25 based on Dahn, applicants note that such a rejection would not be appropriate in view of the strong teaching away in Dahn of the desirability of lithiated gamma-manganese dioxide including less than 0.33 mole of lithium per mole of manganese dioxide.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: September 11, 2008

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